

ProtoDUNE @ CERN

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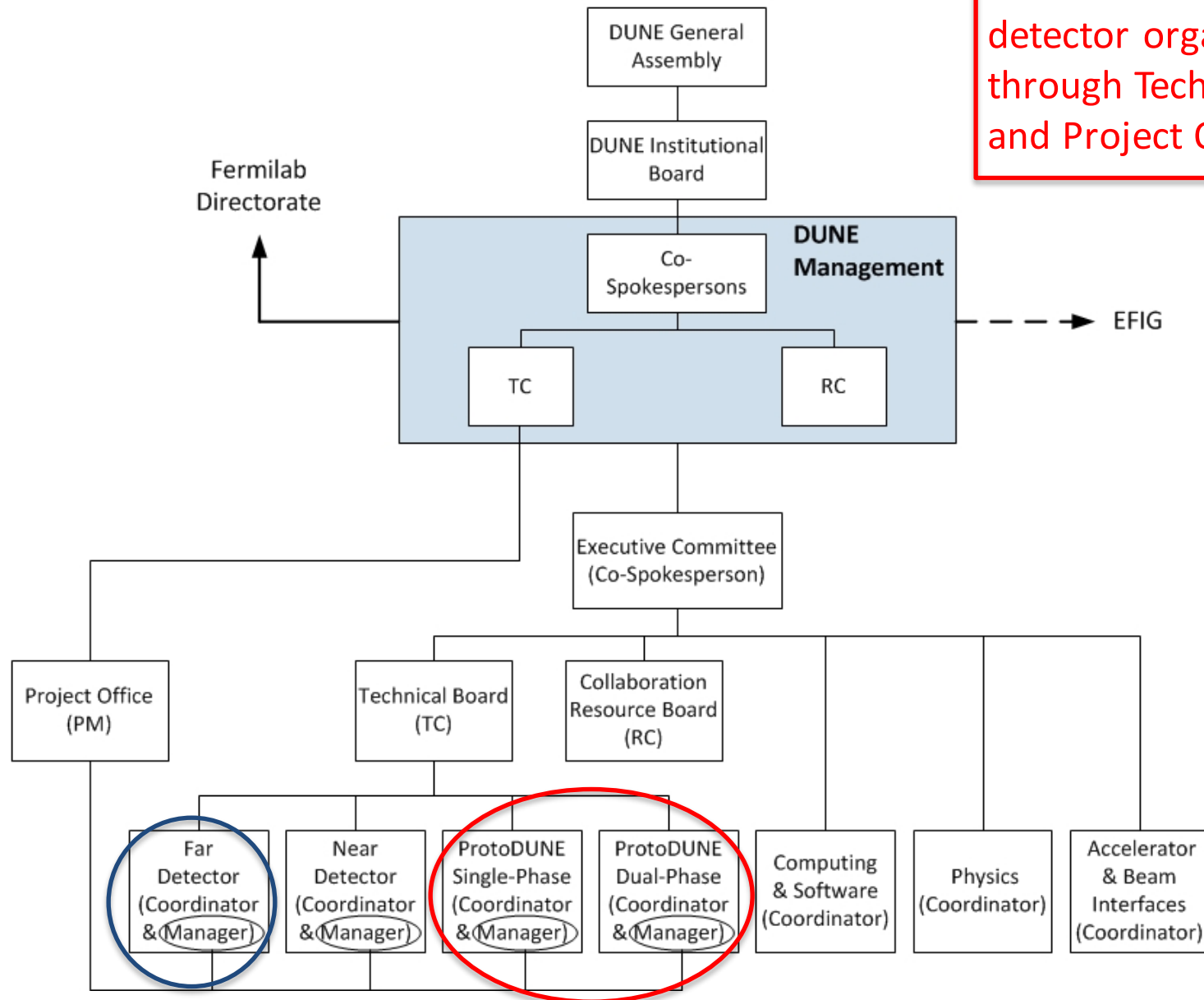
DUNE Collaboration Meeting

January 12, 2016

Key Recent Developments

- CERN research board met in December and officially approved ProtoDUNE Single-Phase (now NP-04) following the SPSC recommendation
- MOUs signed between CERN and the DUNE project for ProtoDUNE Single-Phase responsibilities. MOU for WA105/NP02 signed
- DUNE announced an updated detector management structure incorporating both the single-phase and dual-phase prototyping efforts at CERN that will allow the collaboration to build on synergies between the two efforts

Updated DUNE Management Structure



Coordination across four detector organizations through Technical Board and Project Office

Management Structure for Far Detector and its prototypes

We recognize the need to incorporate NP02 and the dual phase far detector into the FD organization and are working towards this. This is a complex process. This outline shows a simplistic possible model.

131.02.02.01 Project Management (Stewart)

Correlated WG structure

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131.02.02.02 TPC (Paulos, Yu)

131.02.02.03 DAQ (Barr)

131.02.02.04 Installation (Fowler)

131.02.02.05 Photon (Buchanan)

131.02.02.06 Cold Electronics (Hackenburg, Worcester)

131.02.02.07 ProtoDUNE-SP (Chamizo-Llatas)

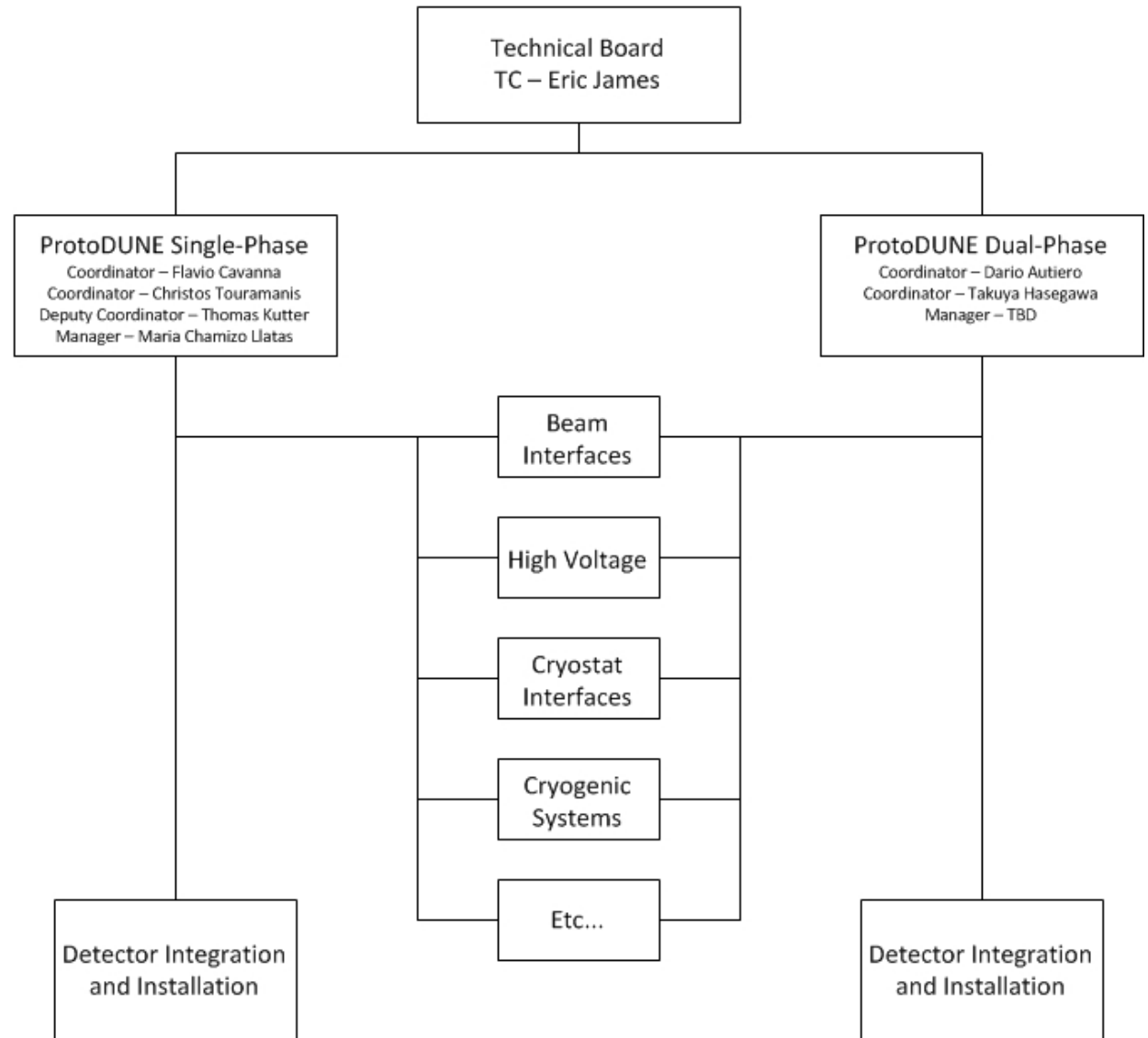
131.02.02.?? ProtoDUNE-DP (???)

New ProtoDUNE Management Teams

- The DUNE management teams who will coordinate ProtoDUNE activities at CERN have been mostly identified
 - ProtoDUNE Single-Phase
 - Coordinators: Flavio Cavanna (FNAL) & Christos Touramanis (Liverpool)
 - Deputy Coordinator: Thomas Kutter (LSU)
 - Manager: Maria Chamizo Llatas (CERN)
 - ProtoDUNE Dual-Phase
 - Coordinators: Dario Autiero (IPNL) & Takuya Hasegawa (KEK)
 - Manager: TBD

Integration of ProtoDUNE Single-Phase and Dual-Phase Efforts

- New management teams will meet at CERN soon to discuss how best to further integrate the two efforts
- Potential structure incorporating common working groups illustrated here

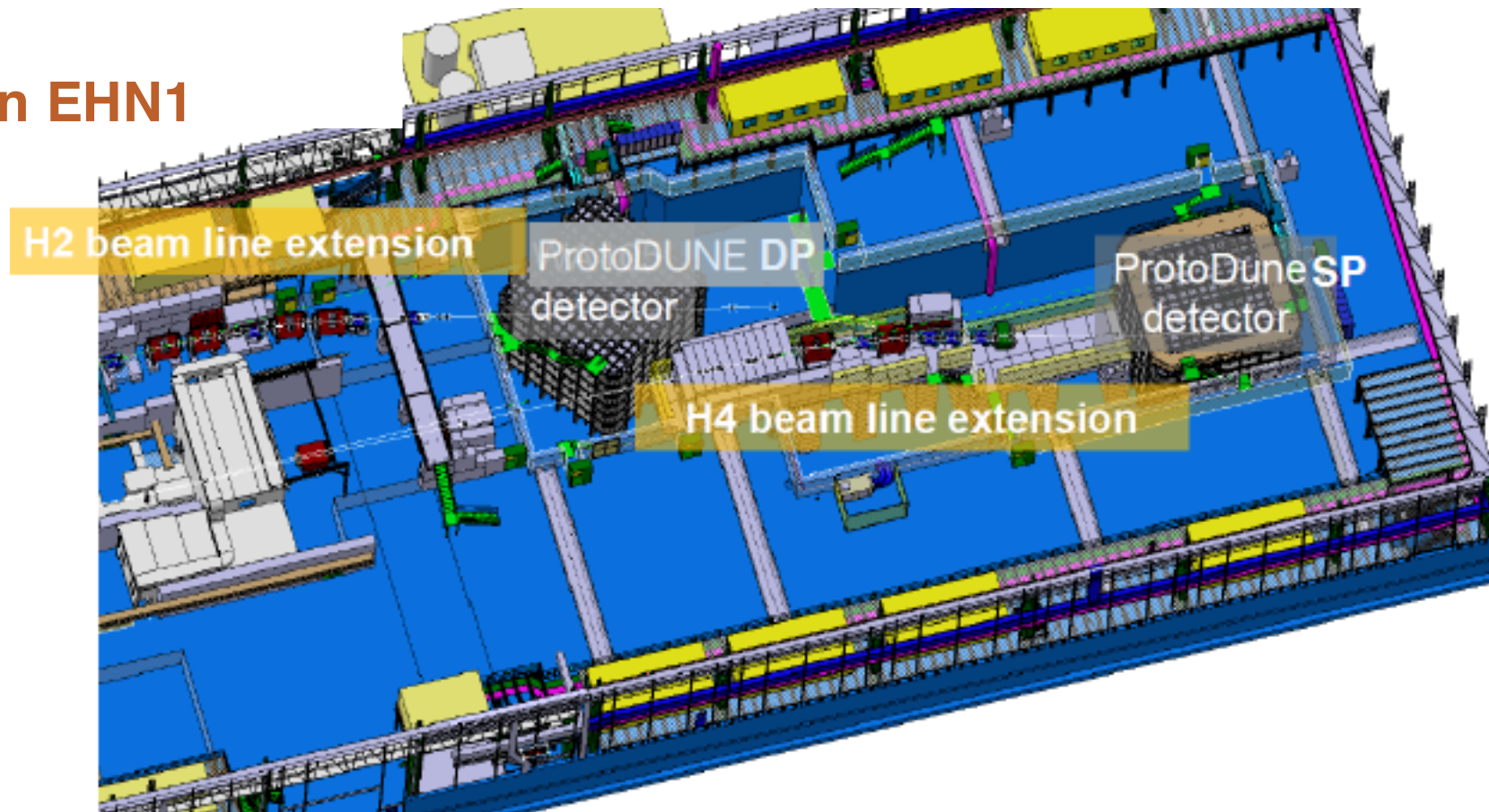


ProtoDUNE Single-Phase Schedule

- The management team has developed a high-level schedule for the next three years that defines the sequence of activities needed to construct, install and commission the detector on the timeline required for operation in 2018
- Currently L3 managers are working to update the complete bottoms-up resource-loaded schedule
- Plan to deploy additional resources in the recently appropriated FY16 budget to speed up critical path activities



ProtoDUNE in EHN1



- Detailed schedule for all work needed to construct & outfit the experimental area, build & install the cryostats and cryogenics
- Installation of detectors occurs 4-6 months earlier than in current ProtoDUNE single-phase schedule (need to reconcile)

- EHN1, ProtoDUNE single-phase and dual-phase management teams plan to meet at CERN soon.



ProtoDUNE TDR Development

- CERN SPSC has asked the ProtoDUNE single-phase management team to produce a Technical Design Report
- The collaboration has set an internal deadline of early summer 2016 for producing this document
- New ProtoDUNE single-phase management team will take the lead on this task drawing heavily on the CDR and ProtoDUNE single-phase proposal
- A TDR describing ProtoDUNE dual-phase already exists at <http://arxiv.org/pdf/1409.4405.pdf>

Summary

- ProtoDUNE single-phase joins the dual-phase as official CERN experiments. The management team has been named to coordinate the activities at CERN
- The ProtoDUNE dual-phase effort is being integrated into DUNE, which will allow the collaboration to better coordinate the two EHN1 efforts and take advantage of synergies
- Immediate work
 - Engage additional collaborators in ProtoDUNE (effort needed soon)
 - Update integrated, resource-loaded schedule covering all activities
 - Assess use of additional FY16 funding to advance the production of critical path detector components
 - Develop overall and detailed QA/QC testing plan
 - Identify collaboration team for enacting testing program
 - Assemble the team on the ground at CERN who will install, commission and operate the detectors